

Fanshawe College

FIRST: Fanshawe Innovation, Research, Scholarship, Teaching

Documentation (Approvals etc...)

Cyber Security

2017

CYB1 Curriculum Modification for 2017-18

Fanshawe College

Follow this and additional works at: https://first.fanshawec.ca/cae_infotech_cybersecurity_documentation

CURRICULUM MODIFICATION REQUEST FORM

COURSE OR PROGRAM CURRICULUM "RATIONALE FOR CHANGE"

Program Requiring Changes

Program Title: Cyber Security		
Program Number: CYB1	Date Submitted: 5/5/2017	
Dean responsible for program: David Belford	Chair: Jim Edwards	
Credential Provided: <input type="checkbox"/> Declaration of Academic Achievement <input type="checkbox"/> Local Certificate <input type="checkbox"/> Ontario College Certificate <input type="checkbox"/> Diploma <input checked="" type="checkbox"/> Advanced Diploma <input type="checkbox"/> Grad Certificate <input type="checkbox"/> Degree <input type="checkbox"/> Apprenticeship		
Program Intakes: <input checked="" type="checkbox"/> F <input checked="" type="checkbox"/> W <input type="checkbox"/> S Other:	Catalogue Year(s) Impacted: 2017/18	
Residency Requirement: <input checked="" type="checkbox"/> Met or <input type="checkbox"/> Not Met	Date of Last Program Review: Click here to enter a date.	
<i>I have read the reasons for the change and...</i>		<i>Signature and date</i>
Dean of Faculty (responsible for program):	<input checked="" type="checkbox"/> Approve <input type="checkbox"/> Do Not Approve	<i>D. Belford May 8/17</i>
Dean of Faculty (impacted by change):	<input type="checkbox"/> Approve <input type="checkbox"/> Do Not Approve	
Dean of Faculty (impacted by change):	<input type="checkbox"/> Approve <input type="checkbox"/> Do Not Approve	
Senior Vice President Academic (required for major changes and late DAs):	<input checked="" type="checkbox"/> Approve <input type="checkbox"/> Do Not Approve	<i>[Signature] May 26/17</i>
Director, Centre for Academic Excellence:	<input checked="" type="checkbox"/> Supports <input type="checkbox"/> Does Not Support	<i>Julie Geddes May 25/17</i>
Office of the Registrar:	<input checked="" type="checkbox"/> Supports <input type="checkbox"/> Does Not Support	<i>Jim Call</i>

mapping req'd. - only level 1 & 2 provided. TS

Please answer each of the questions below, if applicable. Missing or incomplete information may delay review of the proposed changes.

1.0 Describe proposed change(s). Complete Appendix A (if necessary) and amend SDAR (Refer to Appendix C).

Rename INFO- 3130 LAMP Security to SRTY-5008 WEB Security II. LAMP is a tool that does web security but should not be reflected in the course title. Tools change and there are other tools that need to be covered in this course. This course will build on the on concepts and techniques introduced in INFO-1208 PHP Fundamentals in Level 1 and SRTY-3004 Web Security in Level 3, in order to enhance security concepts on servers that handle email and web applications. This should be a level 5 course to reflect the progression of topics in web security.

Remove INFO-5096 Managing & Budgeting Technical Projects in Level 7, (Semester 5)- this content can be covered in other courses, specifically the technical projects in Level 9, (Semester 6) INFO-5120 and INFO-5116. Replace with INFO- 5127 Network Security. This course will concentrate on managing network users and clients with active directory services and end point security solutions. Active directory and end point security are not covered in other courses and the only O/S courses are in 1st & 2nd semester which is too early for these topics. As the earlier courses were being developed it became apparent that a higher level course in Windows network security was missing.

These changes do not affect the hours in the program nor impact the staffing, Co-op, or space and technology requirements. ✓

2.0 Reason/Rationale for Changes

2.1 The reason for the change is based on:

- ☐ A recent program review
- ☐ College Advisory Committee feedback
- ☐ Program Advisory Committee feedback
- ☐ Student feedback
- ☐ KPI results
- ☐ Accreditation or other regulatory requirements
- ☐ Shared curriculum
- ☒ Trends in the field/industry
- ☒ Other (please describe): review of courses for new program

2.2 Does the change support the College's Strategic Framework (mission, vision, values)?

- ☒ Yes
- ☐ No (If no, please explain)

2.3 What strategic goal(s) does the proposed change support?

- ☒ Goal 1 - Enrolment growth
- ☐ Goal 2 - Flexible delivery options
- ☒ Goal 3 - Premier student experience
- ☐ Goal 4 - Sustainable College life

3.0 Students

3.1 Will the change affect the cost of the program for students?

- ☐ Yes
- ☒ No

3.2 If yes, there will be an additional cost for:

- ☐ Materials (Include details):
- ☐ Equipment (Include details):
- ☐ Other (Please describe):

4.0 Program Learning Outcomes

4.1 Will the proposed change meet the Program Vocational Learning Outcomes? (Complete Appendix B and mark the changes in the mapping [e.g. red font])

- ☒ Yes
- ☐ No

4.2 Are there any implications related to progression because of pre-requisite courses (and/or co-requisite courses)?

- ☒ No
- ☐ Yes (If yes, please explain)

5.0 Relationships with Other Programs

5.1 Are any of the courses impacted by the change provided by another School (e.g., SLLS, LKSB) and/or delivered at another campus?

- ☒ No
- ☐ Yes

5.2 What Schools/Campuses will be impacted by the proposed change?

- ☒ School of Information Technology
- ☐ Lawrence Kinlin School of Business
- ☐ School of Tourism and Hospitality
- ☐ School of Health Sciences
- ☐ School of Human Services

- ☐ School of Nursing
- ☐ School of Public Safety
- ☐ School of Contemporary Media
- ☐ School of Design
- ☐ School of Language and Liberal Studies
- ☐ Norton Wolf School of Aviation Technology
- ☐ School of Applied Sciences and Technology
- ☐ Donald J. Smith School of Building Technology
- ☐ School of Transportation Technology
- ☐ Continuing Education
- ☐ Simcoe/Norfolk Regional Campus
- ☐ St Thomas/Elgin Regional Campus
- ☐ Woodstock/Oxford Regional Campus
- ☐ Huron/Bruce Regional Sites

5.3 Will the change affect pathway agreements (e.g., bridging, articulations, laddering, advanced standing) with other Fanshawe program(s) and/or other institution(s)?
(Refer to the pathway agreements listed here: <http://transferagreements.fanshawec.ca/>)

- ☒ No
- ☐ Yes (If yes, indicate when you will notify the other Fanshawe program(s) and/or other institution(s) and the Pathways Coordinator in the Centre for Academic Excellence of the change)

5.4 If this program is a Co-Operative Education program, will the proposed change impact Co-op?

- ☒ No
- ☐ Yes (If yes, consult with the Co-op office prior to submission)

6.0 Resource Implications of Proposed Changes

6.1 Will the proposed change have staffing implications?

- ☒ No
- ☐ Yes (If yes, please explain)

6.2 Will the proposed change impact any of the Enabling areas?

- ☒ No
- ☐ Yes (If yes, please explain)

6.3 Will the proposed change affect space and/or technology requirements?

- ☒ No
- ☐ Yes (If yes, please explain)

7.0 General College Requirements

7.1 Are changes consistent with Colleges policies?

- ☒ Yes
☐ No (If no, please explain)

7.2 Indicate:

- i) Total program hours before proposed change: 2031
ii) Total program hours after proposed change: 2031
iii) Level(s) in which the proposed change(s) occurs: Levels 5 & 7

7.2.1 Are the total program hours consistent with the requirements as listed below?

- ☐ Yes
☐ No (If no, please explain)

Local Certificate - 300 hours	Ontario College Certificate - 600 hours
Diploma - 1200 to 1400 hours	Advanced Diploma - 1800 to 2000 hours
Graduate Certificate - 600 hours	

7.3 Will the program meet the General Education requirements (Policy 2-B-02) as listed below?

- ☐ No
☒ Yes

Local Certificate, Ontario College Certificate and Graduate Certificate - none required)	Diploma - 3 required (minimum of 1 must be an elective)	Advanced Diploma - 4 required (minimum of 2 must be electives)
---	--	---

7.4 Will the program have 25% distinct curriculum to meet the Residency Requirement of 25% credit units? Consider all pathway agreements (e.g., bridging, internal articulations, laddering, advanced standing) with other Fanshawe programs and/or other institutions.

- ☐ No
☒ Yes

Note: In accordance with POLICY NUMBER: 2-B-17 Graduation from Approved College Programs

...to be eligible for any College Credential a student must be enrolled and complete at least 25% of that program's credit units at Fanshawe College, unless stipulated differently by

other approving bodies such as the Postsecondary Education Quality Assessment Board (PEQAB).

APPENDIX A: PROPOSED CURRICULUM MODIFICATION

Course Code	Existing DA Courses	Total Hours	Total Credits		Course Code	Proposed DA Courses	Total Hours	Total Credits
Level 1								
TOTAL		0	0			TOTAL	0	0
Level 2								
TOTAL		0	0			TOTAL	0	0
Level 3								
TOTAL		0	0			TOTAL	0	0
Level 4 (Semester 4)								
INFO-3130	LAMP Security	60	4	rename INFO-3130 to SRTY-5008	SRTY-5008	Web Security II	60	4
TOTAL		60	4			TOTAL	60	4
Level 5 (Semester 5)								
INFO-5096	Managing & Budgeting Technical Projects	45	3	replace INFO-5096 with INFO-5127	INFO-5127	Network Security	45	3
TOTAL		45	3			TOTAL	45	3
Level 6								
TOTAL		0	0			TOTAL	0	0

PROGRAM TOTAL 105 7

PROGRAM TOTAL 105 7

Degree Audit Report

Catalog: 2017/2018

Program: CYB1
Department: ITY - Information Technology
Academic Level: PS
CCD: 9 - 6AcadSem/1800-2100hrs
Credential: Ontario College Advanced Dipl

Name: Cyber Security

RECEIVED

MAY 15 2017

OFFICE OF THE REGISTRAR

Grade Scheme: LG2

Major: CYB1 - Cyber Security

Div: ITY - Information Technology Division

Co-Op Indicator: Mandatory Co-op

Academic Program Requirement

Total Credits: 138.00	Residency Reqmt: 35.00
GPA Requirement: 2.000	Residency Reqmt GPA: 2.000
Minimum Grade: D	

Academic Requirement: CYB1.17 Cyber Security

Major: CYB1
Grade Scheme: LG2
Minimum GPA: 2.000
Minimum Grade:

Subrequirement: Level 1

Take all of the following Mandatory Courses:

Group 1

		Total Hours	Total Credits	GE
INFO-1218	Operating Syst Fundamentals for Security	45.00	3.00	
INFO-1220	Networking Fundamentals for Security	75.00	5.00	
INFO-1221	Programming Fundamentals for Security	75.00	5.00	
INFO-1222	Database Fundamentals for Security	45.00	3.00	
PHIL-1019	Ethics	45.00	3.00	

Group 2

TAKE WRIT-1043 OR WRIT-1034

		Total Hours	Total Credits	GE
WRIT-1043	Reason & Writing 1 for IT	45.00	3.00	
WRIT-1034	Reason & Writing 1 - EAP	60.00	4.00	

Subrequirement: Level 2

Take all of the following Mandatory Courses:

		Total Hours	Total Credits	GE
CRIM-1036	Cybercrime	45.00	3.00	
INFO-1207	Network Components	60.00	4.00	
INFO-1208	PHP Fundamentals	45.00	3.00	
INFO-1209	Cryptography & Authentication Systems	45.00	3.00	
INFO-1210	Securing Linux	60.00	4.00	
INFO-1212	Securing Windows Systems	45.00	3.00	
SRTY-1021	Cyber Security	45.00	3.00	

Subrequirement: Level 3

Take all of the following Mandatory Courses:

Degree Audit Report

		Total Hours	Total Credits	GE
COMM-3077	Communications for IT	45.00	3.00	
COOP-1020	Co-operative Education Employment Prep	6.00	1.00	
INFO-3127	Network Protocols	45.00	3.00	
INFO-3128	Scripting for Security	45.00	3.00	
SRTY-3004	Web Security	45.00	3.00	
SRTY-3005	Security Mechanisms	45.00	3.00	
SRTY-3007	Auditing & Security Controls	45.00	3.00	
SRTY-3008	Security Management	45.00	3.00	

Subrequirement: Level 4

Take all of the following Mandatory Courses:

		Total Hours	Total Credits	GE
COMM-1127	Technical Writing & Presentation	45.00	3.00	
CRIM-3001	Criminology	45.00	3.00	**
INFO-3126	Wireless & Mobile	45.00	3.00	
INFO-3129	Network Monitoring	60.00	4.00	
Delete INFO-3130	LAMP Security	60.00	4.00	
INFO-3131	Evolving Technologies & Threats	45.00	3.00	
SRTY-3009	Computational Intelligence for Security	45.00	3.00	
Add SRTY-5008	Web Security II	60.00	4.00	

Subrequirement: Level 5

Gen Ed - Take a 3 credit General Education elective course

Take all of the following Mandatory Courses:

		Total Hours	Total Credits	GE
Delete INFO-5096	Managing & Budgeting Technical Projects	45.00	3.00	
INFO-5117	Digital & Network Forensics	45.00	3.00	
INFO-5118	Perimeter Defence & Design	60.00	4.00	
INFO-5119	Attack Vectors & Analysis	45.00	3.00	
SRTY-3012	Incidence Handling & Response	45.00	3.00	
SRTY-5007	Penetration Testing	60.00	4.00	
Add INFO-5127	Network Security	45.00	3.00	

Subrequirement: Level 6

Gen Ed - Take a 3 credit General Education elective course

Take all of the following Mandatory Courses:

		Total Hours	Total Credits	GE
INFO-5116	Research Project & Entrepreneurship	75.00	5.00	
INFO-5120	Secure Network Architecture	45.00	5.00	
SRTY-5004	Hacking Techniques & Exploits	60.00	4.00	
SRTY-5005	Penetration Testing-Adv	60.00	4.00	
SRTY-5006	Malware Analysis & Response	60.00	4.00	

Subrequirement: Gen Ed - Electives

Take 6 General Education credits -

Normally taken in Levels 5 and 6

Subrequirement: Program Residency

Students Must Complete a Minimum of 35 credits in this program at Fanshawe College to meet the Program Residency requirement and graduate from this program

Degree Audit Report

JW Edwards
Approved By Chair/Manager:

LL Blythe
Approved by Dean:

General Education Approved By(as appropriate):

ITX May 5/17.
Department and Date:

May 8/17
Date:

Date:

TG.
may 29/17

APPENDIX E – Program Outcomes – Curriculum Map

PROGRAM MAPPING Cyber Security		LEVEL ONE							LEVEL TWO							# OF COURSES EVALUATING THE OUTCOME
PROGRAM VOCATIONAL LEARNING OUTCOMES		INFO-1220 Networking Fundamentals	INFO-1221 Programming Fundamentals	INFO-1222 Database Fundamentals	INFO-1218 Operating Systems Fundamentals	PHIL-1019 Ethics (GM)	WRIT-1043 Reasoning & Writing for IT/ WRIT-1034 Reasoning & Writing - EAP	INFO-1207 Network Components	INFO-1208 PHP Fundamentals	SRTY-1021 Cyber Security	INFO-1209 Cryptography and Authentication Systems	INFO-1210 Securing Linux	CRIM-1036 - Cybercrime	INFO-1212 Securing Windows Systems		
1 - Introductory		1	1	1	1			2	1	1	2	1		1	10	
2 - Building		1	1	1	1			2	1	1	2	1		1	10	
3 - Culminating																
The graduate has reliably demonstrated the ability to: (Source: MTCU Code)																
1. Configure, implement, manage and secure devices and equipment considering the unique features of the computer operating systems, networks, applications and software.																
2. Design, implement and evaluate security solutions for business processes, applications and communications to protect business resources and respond to the needs of all the internal stakeholders.		1	1	1	1			2	1	1	2	1		1	10	
3. Use project management principles to implement security strategies and processes that address the organization's information security requirements.										1					1	
4. Develop, implement and evaluate organizational security policies, standards and regulations to promote internal security.		1	1	1	1			2	1	1	1	1		1	10	
5. Perform vulnerability assessments and penetration testing for infrastructures, web and applications, using both manual and automated techniques.			1							1				1	3	
6. Evaluate and apply tools and techniques to formulate countermeasures to secure information systems against security threats.		1	1	1	1			2	1	1	2			1	9	
7. Perform security audits and forensic analysis to evaluate the effectiveness of a security system, and identify and correct security vulnerabilities.													1		1	
8. Monitor and analyze logs and alerts from network devices to determine the extent of a security breach and what data has been compromised.		1						2	1						3	
9. Identify, collect, and log relevant data as evidence for a sample case within a business or in the Canadian Justice System.						1				1			1		3	
TOTAL # OF OUTCOMES EVALUATED BY EACH COURSE		5	5	4	4	1	0	5	5	7	4	3	2	5		
GM = General Education (mandatory) G = General Education (elective)																

NB - Only indicate the outcomes that are Taught & Evaluated (TE or TRE) in a course

PROGRAM COORDINATOR: Karen MacIntyre

ACADEMIC CHAIR: Jim Edwards

Date Completed: October 2015

Analysis of Mapping Results:

PROGRAM MAPPING (Name of Program)		LEVEL THREE																
PROGRAM VOCATIONAL LEARNING OUTCOMES		COMM-3077 Communication for IT Professionals	COOP-1020 Co-operative Education Employment Prep	SRTY-3008 Security Management	SRTY-3004 Web Security	SRTY-3007 Auditing and Security Controls	INFO-3005 Security Mechanisms	INFO-3127 Network Protocols	INFO-3128 Scripting for Security		SRTY-5008 Web Security II	INFO-3129 Network Monitoring	INFO-3162 Wireless and Mobile	COMM-1127 Technical Writing and Presentations	CRIM-3001 Criminology (GM)	INFO-3131 Evolving Technologies and Threats	SRTY-3009 Computational Intelligence	# OF COURSES EVALUATING THE OUTCOME
1 - Introductory																		
2 - Intermediate																		
3 - Advanced																		
The graduate has reliably demonstrated the ability to: (Source: MTCU Code)																		
1. Configure, implement, manage and secure devices and equipment considering the unique features of the computer operating systems, networks, applications and software.					2		2	3	2		3	2	2	3		2	2	10
2. Design, implement and evaluate security solutions for business processes, applications and communications to protect business resources and respond to the needs of all the internal stakeholders.				2	2	2	2	3	2		3	2	2	3		2		11
3. Use project management principles to implement security strategies and processes that address the organization's information security requirements.				2		2						2		3				4
4. Develop, implement and evaluate organizational security policies, standards and regulations to promote internal security.				2	2	2	2	2	2		3	2	2	3		2	2	12
5. Perform vulnerability assessments and penetration testing for infrastructures, web and applications, using both manual and automated techniques.				2		2						2		3				4
6. Evaluate and apply tools and techniques to formulate countermeasures to secure information systems against security threats.				2	2	2	2	3	2		3	2	2	3		2	2	12
7. Perform security audits and forensic analysis to evaluate the effectiveness of a security system, and identify and correct security vulnerabilities.				2		2	1					2		3				5
8. Monitor and analyze logs and alerts from network devices to determine the extent of a security breach and what data has been compromised.				2		2	2	3	2		3	2	2	3				9
9. Identify, collect, and log relevant data as evidence for a sample case within a business or in the Canadian Justice System.						2	1					1		1	3		3	6
TOTAL # OF OUTCOMES EVALUATED BY EACH COURSE		0	0	7	4	8	7	5	5		5	9	5	9	1	4	4	
V = Vocational Courses E = Essential Employability Skills Courses																		
GM = General Education (mandatory) G = General Education (elective)																		

NB - Only indicate the outcomes that are Taught & Evaluated (TE or TRE) in a course

PROGRAM COORDINATOR: Karen MacIntyre

ACADEMIC CHAIR: Jim Edwards

Date Completed: October 2015

Analysis of Mapping Results:

<p>PROGRAM COORDINATOR: Karen MacIntyre</p> <p>ACADEMIC CHAIR: Jim Edwards</p> <p>Date Completed: October 2015</p>	<p>Analysis of Mapping Results:</p>
---	--

APPENDIX E – Program Outcomes – Curriculum Map

PROGRAM MAPPING Cyber Security																		
PROGRAM ESSENTIAL EMPLOYABILITY SKILLS OUTCOMES				LEVEL ONE							LEVEL TWO							
4 = R	5 = RE	6 = TE	7 = TRE	INFO-1220 Networking Fundamentals	INFO-1221 Programming Fundamentals	INFO-1222 Database Fundamentals	INFO-1218 Operating Systems Fundamentals	PHIL-1019 Ethics (GM)	WRIT-1043 Reasoning & Writing for IT/ WRIT-1034 Reasoning & Writing - EAP	INFO-1207 Network Components	INFO-1208 PHP Fundamentals	SRTY-1021 Cyber Security	INFO-1209 Cryptography and Authentication Systems	INFO-1210 Securing Linux	CRIM-1036 - Cybercrime	INFO-1212 Securing Windows Systems	# OF COURSES SUPPORTING THE OUTCOME	
1. communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.				4	6	5	4	6	6		6	5	5	5	5	5	4	13
2. respond to written, spoken, or visual messages in a manner that ensures effective communication.				5			5	6	6			4		4		4	5	10
3. execute mathematical operations accurately.				4	6	5	7				7	6	7	4	4	4	7	10
4. apply a systematic approach to solve problems.				7	6	7	7		6		7	6	7	7	7	7	11	
5. use a variety of thinking skills to anticipate and solve problems.				7	4	7	7		6		7	4	7	5	7	7	11	
6. locate, select, organize, and document information using appropriate technology and information systems.				6	6	7	6	6	6		7	6	6	5	7	6	12	
7. analyze, evaluate, and apply relevant information from a variety of sources.				6	4	5	5	6	6		4		6	5	6	5	12	
8. show respect for the diverse opinions, values, belief systems, and contributions of others.				5	4	5	4	7	4		4	4	4	4	4	4	12	
9. interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.				4	4	5			4		4	4	4	4	4	4	10	
10. manage the use of time and other resources to complete projects.				7	4	5	5		4		7	4	6	5	6	5	12	
11. take responsibility for one's own actions, decisions, and consequences.				6	4	5	5	7	4		4		4	5	4	5	12	
TOTAL # OF OUTCOMES SUPPORTED BY EACH COURSE				11	10	10	10	6	10	11	10	4	11	11	11	11	10	

PROGRAM COORDINATOR: TBD

ACADEMIC CHAIR: Jim Edwards

Date Completed: October 2015

Analysis of Mapping Results:

PROGRAM MAPPING (Name of Program)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
PROGRAM ESSENTIAL EMPLOYABILITY SKILLS OUTCOMES										LEVEL THREE				LEVEL FOUR																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
4 = R	5 = RE	6 = TE	7 = TRE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
T = Taught	R = Reinforced	E = Evaluated																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
The graduate has reliably demonstrated the ability to: (Source: MTCU Code)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
1. communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.										7	4	4	4	4	4	6	4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

Analysis of Mapping Results:

PROGRAM ESSENTIAL EMPLOYABILITY SKILLS OUTCOMES									
4 = R 5 = RE 6 = TE 7 = TRE									
T = Taught R = Reinforced E = Evaluated									
The graduate has reliably demonstrated the ability to: (Source: MTCU Code)									
1. communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. 2. respond to written, spoken, or visual messages in a manner that ensures effective communication. 3. execute mathematical operations accurately. 4. apply a systematic approach to solve problems. 5. use a variety of thinking skills to anticipate and solve problems. 6. locate, select, organize, and document information using appropriate technology and information systems. 7. analyze, evaluate, and apply relevant information from a variety of sources. 8. show respect for the diverse opinions, values, belief systems, and contributions of others. 9. interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals. 10. manage the use of time and other resources to complete projects. 11. take responsibility for one's own actions, decisions, and consequences.	INFO-5118 Perimeter Defense and Design	INFO-5119 Attack Vectors and Analysis	RTY-5007 Penetration Testing	SRTY-3012 Incident Handling and Response	INFO-5117 Digital Forensics	INFO-5127 Network Security	GEED-XXXX General		GEED-XXXX General
	4	4	4	4	4	4	4		
	5	5	5	5	4	5			
	4	4	4	4	4	4			
	7	7	7	7	6	7			
	7	7	7	7	6	7			
	6	6	6	6	7	6			
	6	6	6	6	7	5			
	5	5	5	5	4	4			
	4	4	4	4	4	4			
	7	7	7	7	7	4	5		
	6	6	6	6	6	4	5		
11	11	11	11	11	10	10	0		

PROGRAM COORDINATOR: Karen MacIntyre

ACADEMIC CHAIR: Jim Edwards

Date Completed: October 2015

Analysis of Mapping Results: